

Cluster Frontline Demonstrations on Oilseeds (2015-16)

The KVKs of Bihar, Jharkhand and Odisha conducted Cluster Frontline Demonstration programme on Oilseeds in an area of 3365 ha during 2015-16. The crops identified for demonstration during rabi 2015-16 in oilseed were rapeseed & mustard, linseed, groundnut, sesame and sunflower. However, ground nut, sesame and sunflower under oilseed and green gram under pulse crop were demonstrated during rabi-summer 2015-16. In implementing the demonstration programmes, the DAC&FW provided the fund support to ICAR-ATARI to the extent of Rs. 214.81 lakh for oilseeds. The demonstration programmes were supervised by a team of experts constituted by DAC&FW in the presence of a scientist from ICAR-ATARI to suggest means for better conduct of frontline demonstration. Emphasis was given to bring rice-fallow under such demonstrations as much as possible followed by adherence to other stipulated norms like conducting demonstration in cluster approach of at least 10.0 ha per cluster, use of seed not older than 10 years old, promotion of INM and IPM and others. ICAR-ATARI Kolkata, through 80 KVKs made all possible efforts to successfully demonstrated the newly released varieties field to showcase the benefit of clustered demonstration programme to a large number of farmers. The results of the programme are given below with other details.

Rabi oilseeds

Rabi Oilseeds are largely grown under the agro-ecological condition of the states of Bihar, Jharkhand and West Bengal and considered as companion crops mitigating the adverse weather situation. Rapeseed and Mustard are most important Oilseed crops of Eastern region of India. Demonstration on Rapeseed & Mustard was conducted covering 1537.2 ha area involving 5252 no of farmers. Several improved technologies were applied during demonstration like varietal management, nutrient management, seed treatment, bio-fertilizer application, bio-pesticide application, aphid management, sulfur management, INM, IPM to enhance the yield/ha. The varieties demonstrated were *Rajendra suflam*, *RGN-48*, *Pusa Mahak*, *Uttra*, *Pusa-27*, *NC-1*, *Agrani*, *B-9* etc. In Rabi season another important oilseed crop is Linseed in eastern states that covered 508.3 ha area involving 1648 farmers with major varieties like *Subhra*, *Garima*, *Sharda*, *Surbhi*, *Neelam*, *Ruchi* and *Azad Alsi-1*. Demonstrations on Linseed were done with complete package of practices and component technologies like seed treatment, nutrient management, disease management, weed management, varietal management etc.

Cluster Frontline Demonstration conducted on *rabi* Oilseeds during 2015-16

<i>State</i>	<i>Rabi Oilseeds</i>	
	<i>No. of Farmers</i>	<i>Area (ha)</i>
Bihar	2657	935.5
Jharkhand	1934	530
West Bengal	2309	580
Total	6900	2045.5

Performance appraisal of *rabi* oilseeds indicates that in rapeseed and mustard, the increase in yield was recorded to the tune of 56.7 to 98.0 per cent, the highest being in the state of Jharkhand. However, the benefit-cost ratio was identical in Bihar and West Bengal (1.83) than Jharkhand (1.5). In linseed also, Jharkhand recorded highest average demonstration yield (124.2%) followed by West Bengal and Bihar which were 85.7 and 83.7 per cent, respectively. With regard to benefit-cost ratio, Bihar was ahead of Jharkhand and West Bengal with 1.9 whereas it was 1.6 and 1.3 for West Bengal and Jharkhand, respectively. In mustard and rapeseed, the KVKs of Bihar demonstrated the varieties like *Rajendra Suflam*, *RGN-48*, *Pusa Mahak* and *Uttra* whereas *Pusa Mahak*, *Pusa-26*, *Pusa-28*, *Pusa-27* and *Pusa bold* were the major varieties demonstrated in Jharkhand. In West Bengal, along with *Pusa Mahak*, *Kashinath*, *B-9*, *NC-1*, *B-54*

and PAN-70 were also demonstrated. In respect of other technologies, seed treatment either with Carbendazim, Bavistin or Trichoderma was the common practice followed in all demonstration on rapeseed & mustard. Nutritional management, application of biofertilizer, weed management, application of micronutrient etc. were the other technologies demonstrated by the KVKs of this zone. In linseed, the KVKs of Bihar demonstrated *Subhra*, *Garima* and *Shekhar* varieties whereas *Sharda*, *Ruchi*, *Neelam*, *Surbhi* and *Azad Alsi-1* were the preferred varieties in the demonstration programme of Jharkhand. In West Bengal, *Deepika*, *Ruchi*, *Shekhar*, *Parvati*, *Sharda* and *Neelam* varieties were demonstration during *rabi* 2015-16. In respect of demonstrated technologies, seed treatment with Carbendazin and Trichoderma, weed management, line sowing, micronutrient application, nutrient management and disease management were the commonly applied practices in all the three states.

Cluster Frontline Demonstration on *rabi* Oilseeds during 2015-16

Crop	State	No. of Farmers	Area(ha)	Yield (q/ha)		% Increase	Economics of demonstration (Rs./ha)			Economics of check (Rs./ha)		
				Demo	Check		Gross cost	Net return	BC ratio	Gross cost	Net return	BC ratio
Rapeseed & Mustard	Bihar	2265	792.2	13.5	7.6	77.6	18511	28760	2.21	16695	18958	1.83
	Jharkhand	1198	305	10.1	5.1	98	14508	24926	2.29	12457	10802	1.5
	West Bengal	1789	440	12.7	8.1	56.7	16998	21614	2.47	18286	17833	1.83
	Total	5252	1537.2	12.1	6.9	75.3	16672	25100	2.32	15812	15864	1.72
Linseed	Bihar	392	143.3	10.1	5.5	83.6	19149	34530	2.43	15369	21210	1.9
	Jharkhand	736	225	7.4	3.3	124.2	11383	11682	1.6	9568	5475	1.33
	West Bengal	520	140	3.9	2.1	85.7	14927	45064	1.92	12817	10754	1.61
	Total	1648	508.3	7.1	3.6	97.2	15153	30425	1.98	12584	12479	1.61



Area covered under cluster frontline demonstration oilseed during *rabi*-summer 2015-16

Sl. No.	Crop	State	No. of Demonstration	Area(ha)
1.	Groundnut	Bihar	-	-
		Jharkhand	-	-
		West Bengal	600	240
		Total	600	240
2.		Bihar	517	206.7

	Sesame	Jharkhand	13	5
		West Bengal	775	310
		Total	1305	521.7
3.	Sunflower	Bihar	1394	557.8
		Jharkhand	-	-
		West Bengal	-	-
		Total	1394	557.8
Grand Total			3299	1319.5